



Progress® Sonic™ Database Service™ simplifies access and re-use of relational data sources in a service-oriented architecture. Eliminating inflexible and costly custom coding, Sonic Database Service makes it easy to configure and execute queries, updates and stored procedures as broadly-available services on Sonic ESB®.

DATA SHEET

KEY CAPABILITIES

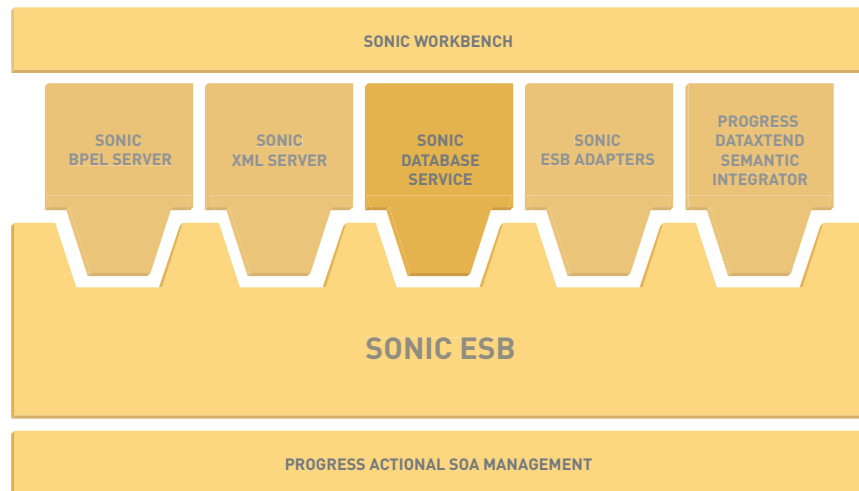
- > Service interface to database queries, updates and stored procedures
- > Out-of-the-box support for Progress, Oracle, DB2, SQL Server, Informix and Sybase
- > Integrates any JDBC driver and its associated data source
- > Support for client load balancing, connection failover and connection retry
- > Customize SQL queries at runtime based on XML message parameters
- > Maps database resultset to XML
- > Eclipse-based development environment to create, test and debug database service operations
- > Service management from anywhere on the bus

KEY BENEFITS

- > Simplifies incorporation of relational data into SOA without coding
- > Ability to customize database operations at runtime
- > Increased scalability and reliability of database services made available on ESB

SIMPLIFIED INTEGRATION OF DATA SOURCES, ENTERPRISE-WIDE

Corporations have tens to hundreds and thousands of data source instances distributed across their enterprises. Typically, these data sources are relational databases, such as Progress, Oracle, DB2, SQL Server, Sybase or Informix, and desktop applications such as Microsoft Excel. As companies move to standardize on XML and achieve greater reuse of existing data assets through the implementation of service-oriented architectures, the challenge is to easily convert relational data resultsets into XML documents. Without a service framework for database access and management, significant time is spent coding XML transformations in languages such as C++, Java and JavaScript and configuring the associated connection settings, management functions and service interactions. What is needed is a more productive and natural way for a database to be accessed and reused as a service by other services throughout the enterprise.



Sonic Database Service is a native ESB service that enables ESB applications to access relational data stored in JDBC-enabled data sources from any location on the enterprise service bus. The Database Service enables a Sonic ESB application to execute SQL statements and stored procedures and transforms the resultset into an XML document, thereby eliminating the associated coding required.

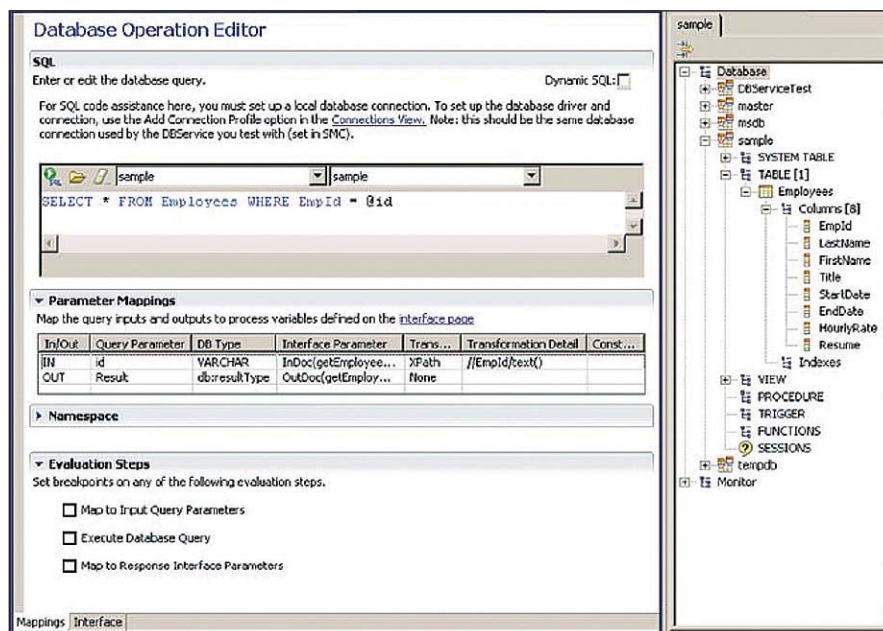
PROVEN DRIVERS WITH ROBUST JDBC 3.0 IMPLEMENTATION

Sonic Database Service embeds DataDirect Connect for JDBC drivers, the fastest and most comprehensive set of Type 4 JDBC drivers. With support for all the major databases, developers can standardize on one driver set and do not have to deal with the frustrations of working with different drivers of varying quality and multiple support organizations. The drivers are built on a common architecture and all have similar implementations of the JDBC standard. Out-of-the-box support is provided for leading databases including: Progress OpenEdge, Oracle 8i, IBM DB2, Microsoft SQL Server, Sybase Adaptive Server, and Informix Dynamic Server. The Database service can integrate any JDBC driver and its associated data sources, e.g. Microsoft Excel.

RAPID DEVELOPMENT, TEST AND DEBUG

Progress® Sonic Workbench™ provides an Eclipse-based intuitive database operation editor to create, test and debug SQL queries, map XML documents to SQL query parameters and map the resultset to XML documents without the need for custom coding. Creation of SQL statements is facilitated through statement auto-completion and support for drag and drop of table elements from the database tree view. Once SQL statements have been defined, test scenarios can be created to validate and debug input parameters, the SQL resultset and output transformations, saving significant development time vs. debugging database interactions manually.

The database operation editor and Sonic uniform service invocation model provide a common methodology for programming access to all relational data sources enterprise-wide.



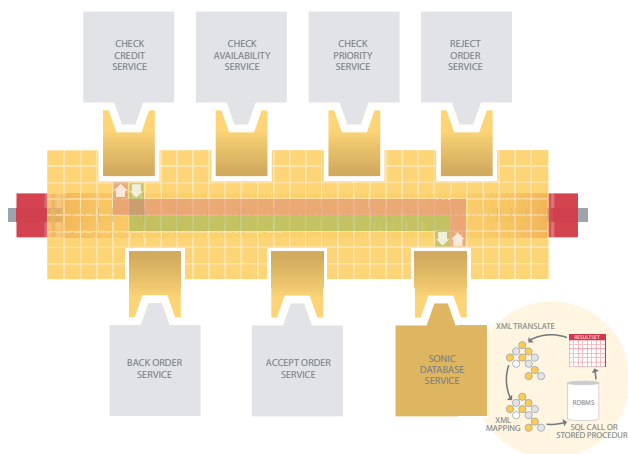
Configuration-driven development and testing of database queries eliminates custom coding.

INPUT AND OUTPUT MAPPING PARAMETERIZATION

Database Service automates the steps to extract and translate XML data from an incoming message, call a database and translate and insert the resultset into an XML message. In a Database Service application, the XML documents and values used in the ESB process are mapped into database operation input parameters, or mapped using XSLT transformations or XPath expressions, so database queries, updates or stored procedures can be customized at runtime. Similarly, the resultset returned by a database operation is mapped back into output variables for the ESB process with support for applying XPath expressions or XSLT transformations. Different parameter values, and/or XPath and XSLT transformations, can be supplied each time a statement is executed, increasing the reuse of SQL statements.

By using standard SQL and configuring input/output parameters vs. coding variables and transformations using third-generation languages, the development to deployment cycle is reduced, there is less code to maintain, and database portability is improved.

Additionally, with Dynamic SQL support, queries generated at runtime by the sending application can be directly executed by the Database Service.



Start, stop, monitor, and configure database services from anywhere on the ESB.

LOAD BALANCING, FAILOVER, POOLING AND RETRY

Sonic Database Service drivers are compliant with the JDBC 3.0 specification and advanced functionality is provided to increase the scalability and reliability of database operations, including client load balancing, connection pooling, connection failover and connection retry.

Client load balancing helps distribute new connections, and connection pooling listener threads can be configured, so that no one server is overwhelmed with connection requests. Connection failover allows an application to connect to an alternate, or backup, database server if the primary database server is unavailable, for example, because of a hardware failure or traffic overload. And with connection retry, the JDBC driver will retry connections from a list of database servers (primary and alternate) until a successful connection is established. Connection timeout and reconnect parameters for Sonic Database Service can be set to optimize performance.

Sonic Database Service can be configured to execute upon receipt of a message or at a scheduled time using a polling query, providing flexibility in choice of database interactions.

CENTRALIZED MANAGEMENT OF DATABASE SERVICES

Through the Sonic Management Console, all database services can be configured, started, stopped and monitored-from a central location. The Sonic Directory Service provides a central repository for the input/output mapping logic and database operations. Through this repository, it is easy to deploy applications, replicate to other locations and provide continuous availability should there be a single directory service failure.

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PLATFORM

- > Sun Solaris
- > Microsoft Windows
- > HP-UX
- > IBM AIX
- > SuSE Enterprise Linux
- > Red Hat Enterprise Linux

PACKAGING

- > Sonic Database Service
Per-CPU deployment license
- > Sonic Workbench
Named-user development license

ABOUT PROGRESS SOFTWARE

Progress Software Corporation (Nasdaq: PRGS) provides application infrastructure software for the development, deployment, integration and management of business applications. Our goal is to maximize the benefits of information technology while minimizing its complexity and total cost of ownership.

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